

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-024471**Date Inspected:** 05-Jun-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Lu Hua Jie**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Chang xing Island in Shanghai, China. QA observed and/or found the following:

**BAY 14:**

This QA Inspector performed randomly Visual Inspection and Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL-6027 (UT) report for this date. The member is identified as OBG Segment 14 East. The weld designations reviewed are as follows.

SEG3009N-003

NDT Notification No-09367

This QA Inspector randomly observed the following work in progress.

**SMAW Process:**

This QA Inspector observed ZPMC qualified welding personnel identified as 216086 Perform Shielded Metal Arc Welding (SMAW) on OBG Segment 14 East Edge panel I rib joint. Joint identified as PCMK SEG3019AZ -017. ZPMC QC Identified as Zhu Yuan Yuan. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-P-2212-Tc-u4b-Fcm-1. For more information see below attached picture number 1.

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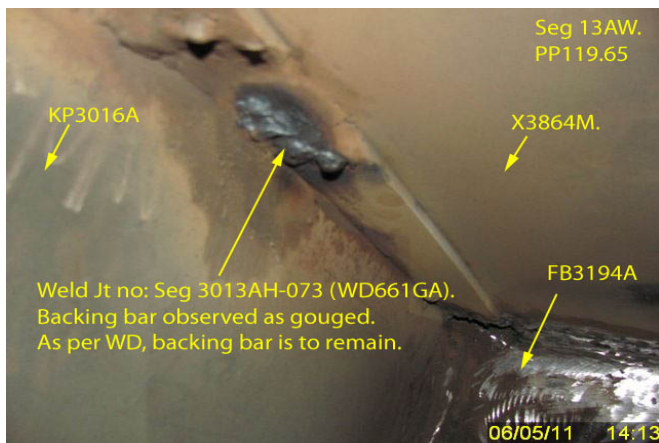
## Repair welding, SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 044779 Perform Shielded Metal Arc Welding (SMAW) on OBG Segment 14 East. Joint identified as PCMK SEG3019S-111. ZPMC QC Identified as Zhu Yuan Yuan with Temporary welding repair report WRR-B-WR21050. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-3G (3F)-FCM-Repair-1.

## Description of Incident:

During the Quality Assurance Visual Inspection and Ultrasonic Testing (UT) review of welds located on OBG Seg 13AW, this Quality Assurance Inspector (QA) discovered the following issues: ZPMC Ultrasonic Testing (UT) technicians have tested and accepted a weld repair that did not meet the Visual Testing (VT) requirements of the contract documents. The weld is a Complete Joint Penetration (CJP) T-joint with 6mm reinforcing fillet (joining the top of X3864M standard "K" plate stiffener and K-Plate, KP3016A) and backing bar (to remain) at the bottom side of X3864M to K-Plate. See WD661GA. The backing bar was observed partially excavated / gouged [at approx 300mm from Floor Beam (FB) 3194A at panel point (PP) 119.65] and no additional weld metal has been deposited. The weld is identified as Seg3013AH-073 and is been accepted by ZPMC / ABF UT personnel. The weld is located at PP119.65mm. Material thickness is 22mm. The weld is designated as a Failure Critical Weld (FCW). The Notice of Witness Inspection Number (NWIT) is 09367. As per the contract documents, ZPMC's Quality Control (QC) personnel are required to perform 100% VT/UT inspection of repaired areas on CJP welds. For more information see below attached pictures. This QA Inspector generated incident report for this date.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang: 15000422372, who represents the Office of Structural Materials for your project.

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## WELDING INSPECTION REPORT

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<b>Inspected By:</b>	Gaikwad,Shailesh	Quality Assurance Inspector
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<b>Reviewed By:</b>	Patterson,Rodney	QA Reviewer
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